TURN Presentation to the Energy Efficiency All Party Meeting

May 30, 2006

Cynthia Mitchell, Energy Economics Inc.
Consultant to TURN

“Next Generation” Energy Efficiency

- TURN focus:
  - Residential & Small Commercial HVAC and Residential Lighting
  - Increase HVAC while maintaining lighting
  - Increase the “Yield” MW & Gwh saved per $$ EE investment
- Why?
  - Peak electrical consumption is the critical feature & weak point of the CA electrical infrastructure
  - Because CA can do <u>even</u> better!

Next Generation EE also includes:

- New and different approaches to:
  - Local government partnerships (LGPs) and Third-Parties (3Ps)
  - Statewide Market Leverage
  - Split-incentive landlord-tenant; residential, commercial

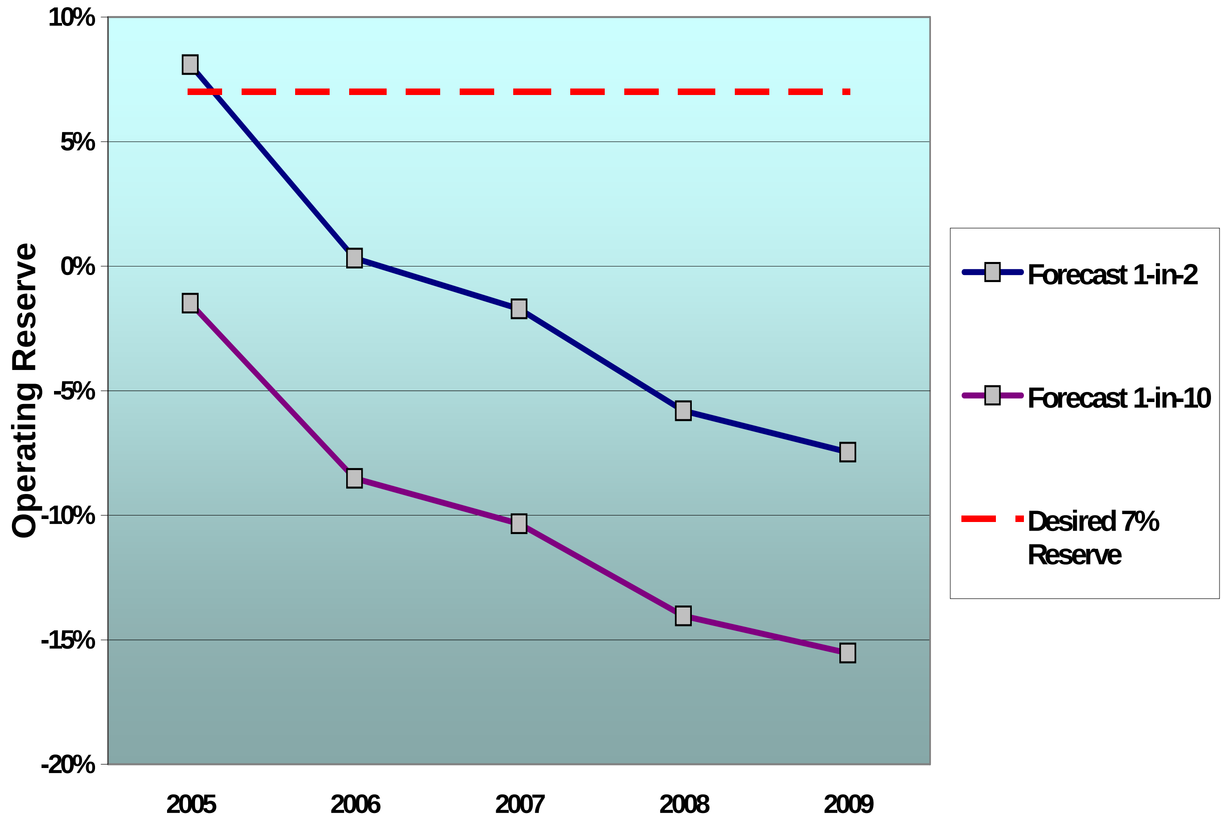
Comparison Program Administrators' Cost-Effectiveness Metrics

PG&E	TRC	PAC
Portfolio	1.61	2.15
Partners	**2.40**	**2.25**
SCE	TRC	PAC
Portfolios	2.38	3.16
Partners	**1.75**	**1.74**
SDG&E	TRC	PAC
Portfolios	1.87	2.51
Partners	**1.94**	**2.18**

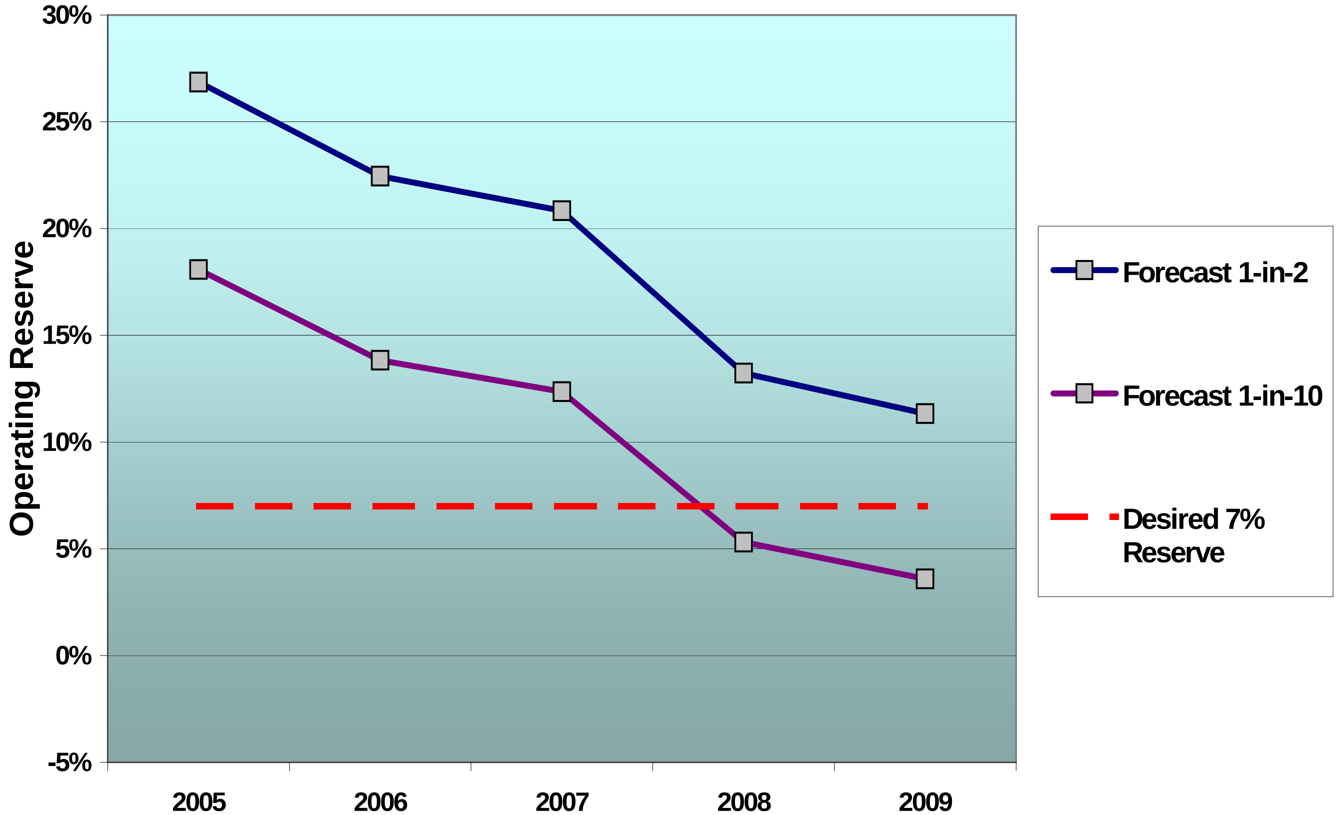
PG&E Total Portfolio to Partnerships

	Total		Space Cooling		Lighting	
	MW	Gwh	MW	Gwh	MW	Gwh
Portfolio Total			25%	11%	41%	54%
Partnership Total	14%	14%	**36%**	**24%**	47%	54%

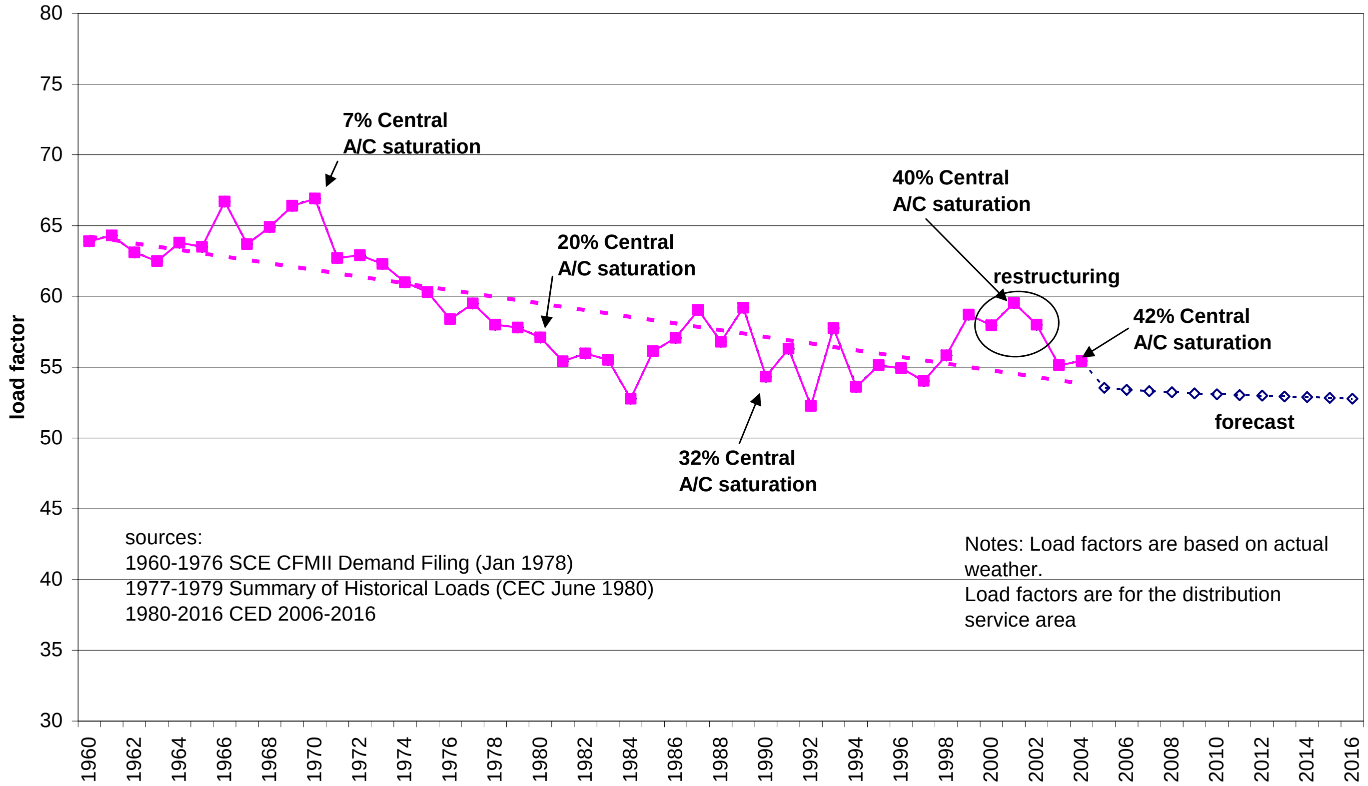
2005-2009 Reserve Southern California



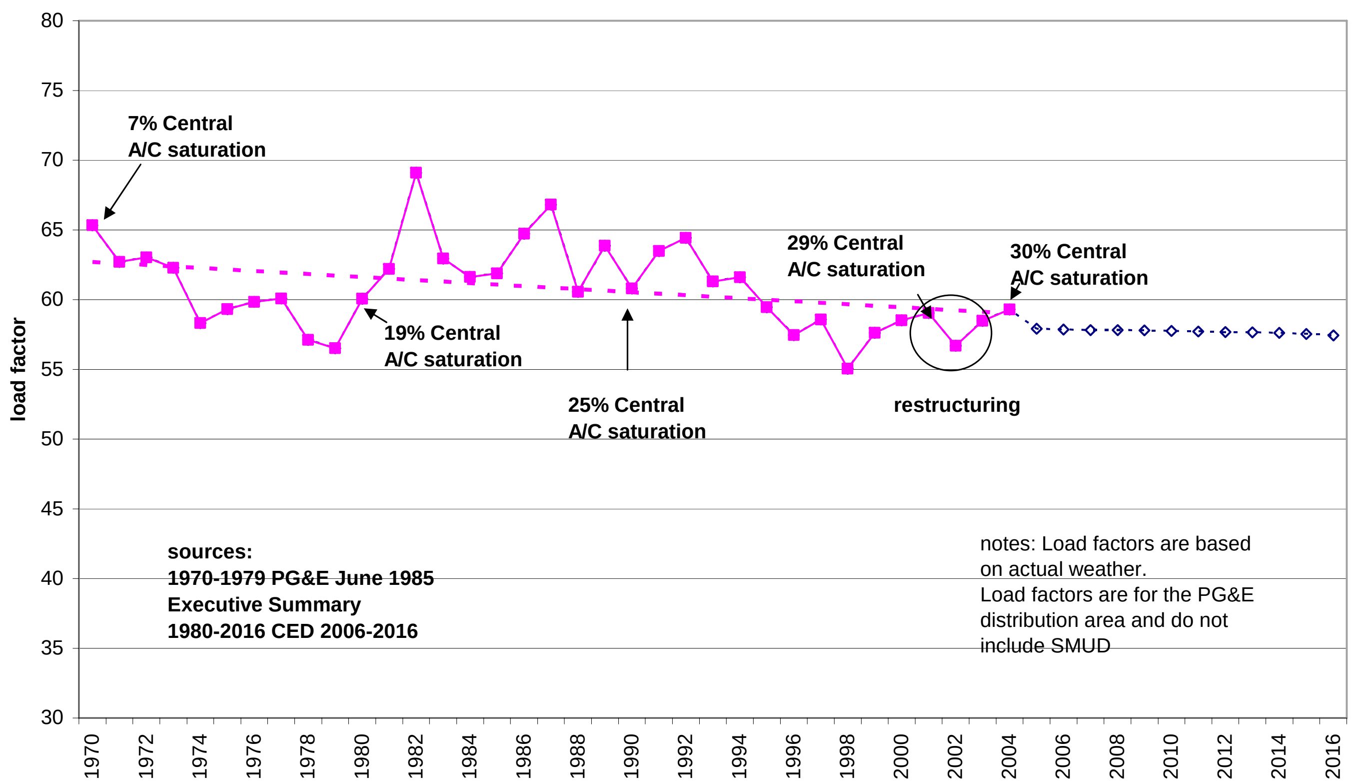
2005-2009 Reserve Northern California



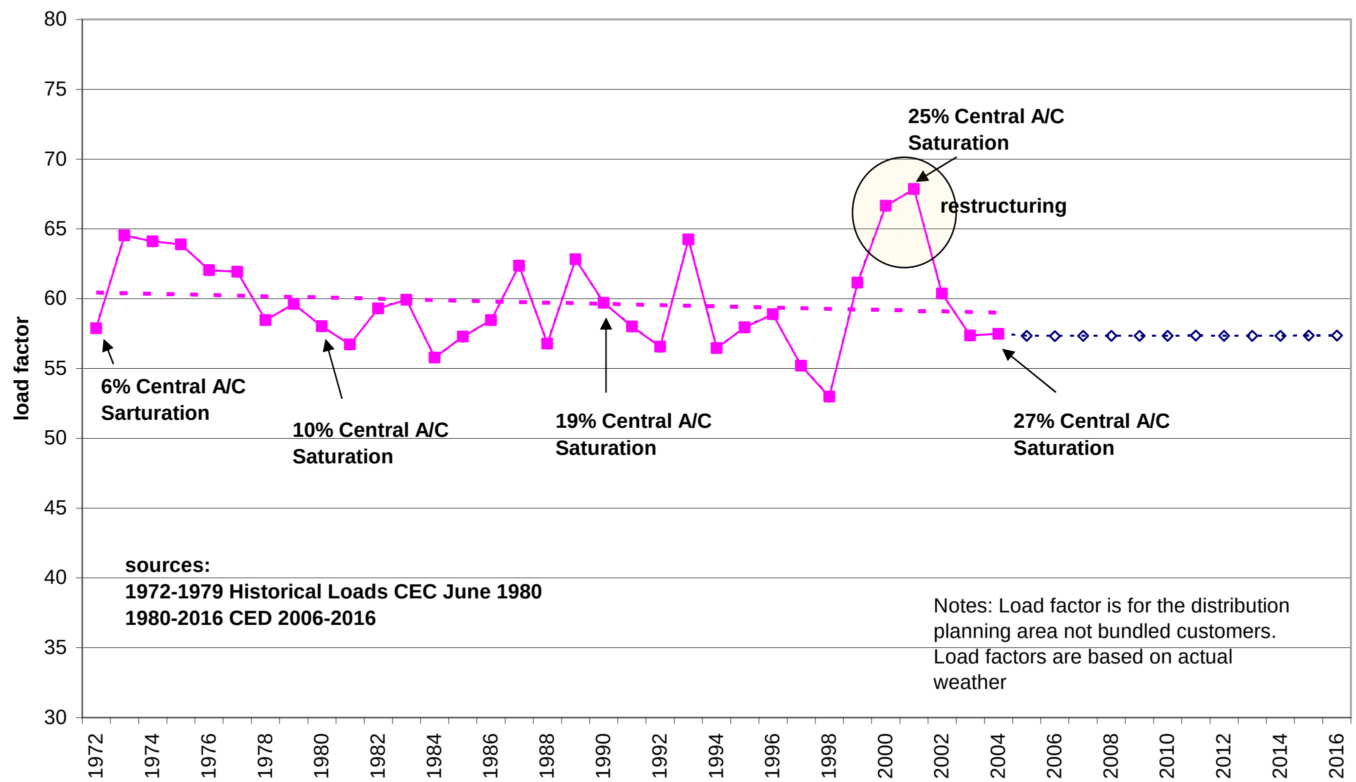
SCE Historic Load Factors 1960-2004



PG&E Historic Load Factors 1970-2004

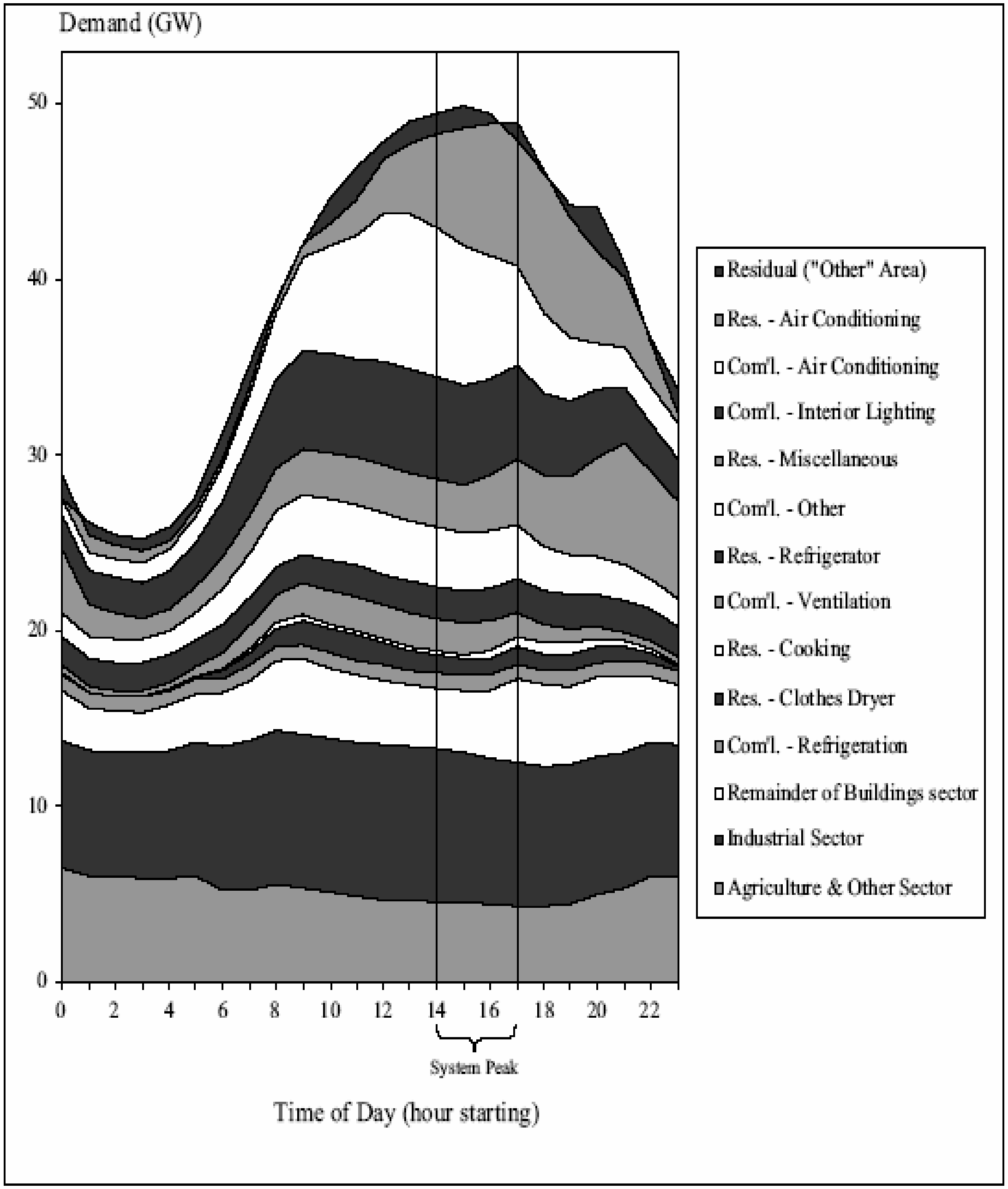


SDG&E Historic Load Factors 1972-2004



System Load Factors
2006 – 2008 (3-year average)

	w/ EE	w/o EE
PG&E	51.2%	51.4%
SCE	57.1%	57.1%
SDG&E	56.4%	56.4%



Source: Brown and Koomey 2002.

End Use Equivalent Load Factors

Residential space cooling	**10%**
Commercial space cooling	**30%**
Residential Lighting	**60%**
Commercial Lighting	**55%**

CA Statewide HVAC "Quality Installation" Campaign

- 2006-2008 $100 million +
- Equipment and services
  - High efficiency equipment
  - Services
    - Quality installation and maintenance
      - Equipment sizing
      - Duct systems
      - Refrigerant charge and air flow

Lighting

- 2006-2008 Portfolios are about ½ lighting; w/about half of savings from screw-in CFLs

	MW	Gwh
SCE	47%	47%
PG&E	41%	54%
SDG&E	42%	59%

Lighting and CFLs Savings and Costs

- Possibly over promising the savings:
  - NTG ratios
  - EULs
  - Estimated savings: DEER vs non-DEER data
- Can do better on the costs:
  - Bulb and fixture costs at retail prices.
  - Total incentive costs (rebate, labor installation) exceeding IMC incremental measure cost (retail cost)

Statewide Market Leverage

- We have statewide Consistency and Coordination; but missing
- Statewide Market Leverage
  - Manufacture level: discounts/buy-downs all possible EE equipment/appliances
  - Retail level: point-of-sale/purchase (cash register) rebates

Market & Customer Sector "Missed/ Lost Opportunities"

- Split incentives: Landlord-tenant; residential, commercial